

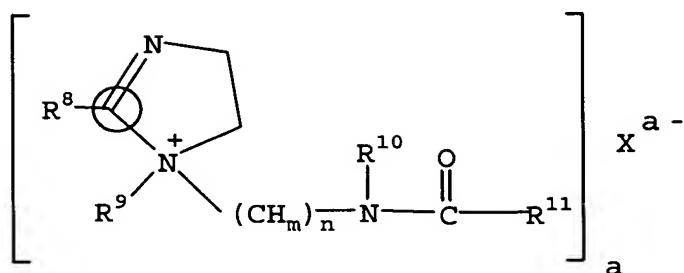
REMARKS/ARGUMENTS

The present communication is responsive to the Final official action mailed August 4, 2005.

Claims 3-7, 10-16 and 23-35 are pending in the application. No amendments to the claims have been made. For the reasons discussed herein, Applicants respectfully traverse the examiner's rejections and request the examiner to reconsider patentability of the pending claims based on the arguments herein.

The examiner rejected claims 3-7, 10-16 and 23-35 under 35 U.S.C. § 103(a) as being unpatentable over JP 60-81376 or JP 58-144174 or Barnabas et al. (U.S. Patent No. 5,721,205). More specifically, the examiner stated that the present invention, comprising imidazoline quats having at least about 30% of alkyl groups of at least 19 carbons in length, are obvious over the Japanese references which allegedly teach the use of composition comprising imidazoline quats with R groups derived from beef tallow. The examiner reasoned that since "beef tallow comprises approximately 60% of C-18 chains [which] is the *next lower homolog* of C-19, similar results would be expected with C-19, absent any showing of unexpected results." (See 8/4/05 Office Action, at page 2) (emphasis added.) Applicants respectfully traverse this rejection.

First, Applicants would like to clarify that, according to the general formula (II) as shown below, when R⁸ is an alkyl group of 19 carbons in length as recited in claim 3, for example, there are actually total of 20 carbons since the vertex at the circled position represents a carbon atom.



(II)

Similarly, when R^{11} is an alkyl group of 19 carbons in length, there are also total of 20 carbons since R^{11} is connected to a carbon atom as shown above.

Therefore, the Patent Office's characterization that the present invention contains an alkyl group of 19 carbons in length (C-19) is incorrect because there are at least 20 carbon atoms (C-20) in the present invention as explained above. Furthermore, a chain containing 20 carbon atoms (C-20) is NOT the next adjacent homolog of C-18, as the examiner has noted.

Moreover, even if the fatty acid portions of the present invention are C-19 compounds, although it is not, the mere fact that one compound of beef tallow is a C-18 compound and one compound of the present invention is C-19 does not make the "structural obviousness rejection based on homology" appropriate.

The claimed compounds are mixtures. The fact that there is close structural similarity between one member of one mixture and one member of a second mixture cannot render obvious the entirety of the second mixture.

Since the mixtures of the prior art and the mixtures of the present invention are not homologs as alleged, (indeed, for the reasons discussed above, it is inappropriate to refer to such complex mixtures as homologs), the examiner must further show that there is an art recognized expectation that mixtures containing compounds of similar structure will have similar properties to establish a *prima facie* case of obviousness, which

the Patent Office has failed to do in this case. *In re Payne*, 606 F.2d 303, 313 (CCPA 1979); *In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1998) (The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead to the claimed invention.)

Furthermore, the Patent Office's statement that "use of compositions with R groups derived from beef tallow is exemplified, so the definition of the R groups [in the Japanese references] clearly embraces mixtures of chain lengths" is not correct (see 8/4/05 Office Action, at page 2) because the Japanese references do not teach or suggest the use of composition comprising *imidazoline quats* with R groups derived from beef tallow.

For example, the specification of the Japanese reference, JP 60-81376, only discloses that the R groups of *quaternary ammonium salts*, not *imidazoline salts*, are substituted with beef tallow. (i.e., dihydrogenated beef tallow alkyl dimethyl *ammonium* chloride, and dehydrogenated beef tallow ethyl benzyl *ammonium* chloride) (see JP 60-81376, page 3). There is no teaching or suggestion that the R groups of imidazolinium salts also embrace mixtures of chain lengths. In fact, all of the examples in JP 60-81376 and other portions of the specification show the use of *imidazoline* salts comprising R groups of one chain length (i.e., $R_1=C_{17}$, $R_2=C_{18}$) as follows:

Example 3 at page 6 and specification at page 3

- 2-heptadecyl-1-ethyl-1-[(2-octadecanoylamino)ethyl] imidazolinium ethyl sulfate

Similarly, Japanese reference, JP 58-144174, fails to teach or suggest that R groups of *imidazoline* salts having a mixture of alkyl groups having different chain lengths because it only discloses that the R groups of *quaternary ammonium salts* are

substituted with beef tallow. (i.e., dihydrogenated beef tallow alkyl dimethyl **ammonium** chloride, and dihydrogenated beef tallow alkyl ethylbenzyl **ammonium** methyl sulfate, dihydrogenated beef tallow alkyl methyl hydroxyl ethyl **ammonium** methyl sulfate) (see JP 60-81376, page 3, and examples at pages 5-6). There is no teaching or suggestion that the R groups of imidazolinium salts also embrace mixtures of chain lengths. Similar to the JP 60-81376 reference, all of the examples in JP 58-144174 and other portions of the specification show the use of **imidazoline** salt comprising R groups as follows:

Specification at page 3

- 2-heptadecyl-1-methyl-1-[(2-octadecanoylamino) ethyl] imidazolinium ethyl sulfate,
- 2-hexadecyl-1-methyl-1-[2-hexadecanoylamino) ethyl]imidazolinium chloride

Example 1. Table 1, at page 5

- 2-hexadecyl-1-methyl-1-[(2-hexadecanoylamino) ethyl]imidazolinium chloride

Finally, similar to the Japanese references mentioned above, a *prima facie* case of obviousness is not established based on Barnabas et al. since it only teaches a fabric softener comprising the use of composition comprising imidazoline quats with R groups derived from beef tallow.

Because the cited two Japanese references, JP 60-81376, and JP 58-144174, and Barnabas et al. fail to teach or suggest all of the claim limitations, (i.e., the R groups of dialkyl **imidazoline quats** is a mixture of alkyl groups of **various chain lengths**, wherein **at least 30%** of which are **alkyl groups of at least 19 carbons in lengths**), Applicants respectfully request the Examiner to review and withdraw the rejection under 35 U.S.C. § 103(a) based on these references.

In view of the above, each of the presently pending

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claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone Applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: October 3, 2005

Respectfully submitted,

By 

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